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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,076	08/26/2003	Jeffrey Koelling	303.861US1	3372
7590	01/21/2005		EXAMINER	
Attn: Viet V. Tong Schwegman, Lundberg, Woessner & Kluth, P.A. P.O. Box 2938 Minneapolis, MN 55402			ZWEIZIG, JEFFERY SHAWN	
			ART UNIT	PAPER NUMBER
			2816	
DATE MAILED: 01/21/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

(1)

Office Action Summary	Application No.	Applicant(s)
	10/648,076	KOELLING, JEFFREY
	Examiner	Art Unit
	Jeffrey S. Zweizig	2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 02 December 2004.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 8,9,11-21,27,30-33,41-45,48-52,56,57 and 59-61 is/are allowed.
- 6) Claim(s) 1-6,22-24,26,34,35,38,39,46,47,54 and 55 is/are rejected.
- 7) Claim(s) 7,10,25,28,29,36,37,40,53 and 58 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 26 August 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

Claim Objections

1. In amended claim 1, there is no antecedent basis for the "bandgap reference voltage". It would appear that "bandgap" should be deleted.

In claim 28 line 19, "the second internal nodes" should be --the second internal node--.

Claim Rejections - 35 USC § 102

2. In light of Applicant's amendments, the previous rejections are withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 22-24, 26, 34, 35, 38, 39, 46, 47, 54 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magliavacca.

Fig. 2 discloses a MOS current mirror 124, first and second BJT control transistors 126, a resistive element 128 and an output unit 152/154/156 configured and operating as defined in claims 1-3.

Migliavacca does not appear to specify a stable output reference voltage level with a supply input of 1.3 to 1.5 volts as recited in claim 1. As is known to those of

ordinary skill in the art, 1.3 to 1.5 volts is now a common supply voltage range. The Migliavacca circuit design does not appear to preclude a supply voltage range of 1.3 to 1.5 volts. It would have been obvious to one of ordinary skill in the art at the time of the invention to scale the circuit of Fig. 2 so as to produce a stable reference voltage level with a supply input of 1.3 to 1.5 volts for the benefit of providing a stable reference voltage in a low voltage environment. Claims 1-3 are obvious.

Based in the text at column 1 line 60 and column 5 line 28, it would appear Migliacca anticipates unequal transistor sizes as recited in claim 4.

The circuit inherently includes the parasitic transistors recited in claim 5.

Further shown is an output transistor 152, a control transistor 154 and a resistive element 156 as recited in claim 6.

Claim 22 is obvious for the reasons above except for the order of the output control transistor 154 and the output resistive element 156. Since these are two series connected components with no intervening components or connections, their order is electrically irrelevant. It would have been obvious to one of ordinary skill in the art at the time of the invention to change to order of components 154 and 156 for the benefit of possibly optimizing the layout arrangement of the two components in an integrated circuit. Also note that for the purposes of these rejections, Examiner is obviously relying on the optional connection 160. Claim 22 is obvious.

Claims 23, 24 and 26 are obvious for the reasons above.

The power unit limitation in claim 34 is a bit vague. Examiner is reading it as a means for supplying a supply (internal) voltage to the reference circuit. Migliavacca

would inherently include such means for supply a voltage to internal node 114. Claims 34 and 35 are otherwise obvious for the reasons above.

Magliavacca does not appear to disclose a specific circuit application as recited in claim 38, however, as is well known to those of ordinary skill in the art, processor/memory circuits often include such regulator circuits. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize such a regulator circuit in processor/memory systems for the benefit of providing stable reference currents and voltages to the system. Claims 38 and 39 are otherwise obvious for the reasons above.

Claims 46, 47, 54 and 55 are obvious for the reasons above.

Allowable Subject Matter

5. Claims 7, 10, 25, 29, 36, 37, 40, 53 and 58 are objected to as being dependent upon a rejected base claim, but may be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 8, 9, 11, 12-21, 27, 28 (save minor objection above), 30-33, 41-45, 48-52, 56, 57 and 59-61 appear to be allowable over the Prior Art of record.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Zweizig whose telephone number is (571) 272-1758. The examiner can normally be reached on Monday thru Thursday 6:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2816

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JZ
Jeffrey S. Zweizig
Primary Examiner
Art Unit 2816

JZ